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Application No: **09/804,792**
Title: **Multi-Circular Flux Motor**
Group Art Unit: **2834**
15th May 2004

Dear Sir/Madam

According to the NOTICE OF DRAWING INCOMSISTENCY WITH SPECIFICATION (FORM PTO-1631), the figures 1 is contained in the drawing but not listed in the Brief Description of the drawing in the specification. Therefore, I would like to correct the inconsistency. The correction and the copy of the notice are attached with this letter.

Also I would like to inform that I would like to change all of my address relate to this patent application to the following address.

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Best Regard

Poramaste Jinupun

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DRAWING DESCRIPTION OF THE INVENTION

- **Fig.1:** A flux density of one phase excitation (Prior Art)
- **Fig.2:** A simple one pole of the invention (Every tooth of a stator pole are wound), all windings are connected together and are one phase excitation
- **Fig.3:** A simple one pole of the invention (Every odd tooth of a stator pole are wound), all windings are connected together and are one phase excitation
- **Fig.4:** A simple one pole of the invention (Every even tooth of a stator pole are wound), all windings are connected together and are one phase excitation
- **Fig.5:** A torque profile of the invention compare to a prior art: torque of 9 teeth (31); total torque (32); prior art torque (33)
- **Fig.6a:** A simple 3-phase of the invention (non-overlap-pole type): configuration for an odd number of stator teeth per pole (9 teeth)
- **Fig6b:** A simple 3-phase of the invention (non-overlap-pole type): configuration for an even number of stator teeth per pole (8 teeth)
- **Fig.7a:** the best mode of the invention, an overlap-pole type as DC PULSE machine, each phase are separated and some teeth have more than one phase
- **Fig.7b:** the best mode of the invention, an overlap-pole type as AC machine, each phase are separated and some teeth have more than one phase
- **Fig.8a:** The current direction of the winding related to the multi-circular flux loops rotation direction, all windings are connected together and are one phase excitation
- **Fig.8b:** The invention in term of a toothless-stator machine, all windings are connected together and are one phase excitation
- **Fig.9a:** The 3-phase DC pulse motor: each phase are separated and some slot have more than one phase; first row is phase C; second row is phase B; third row is phase A
- **Fig.9b:** The 3-phase AC motor: each phase are separated and some slot have more than one phase; first row is phase C; second row is phase B; third row is phase A.
- **Fig.10:** The simple invention in a term of a linear motor: 2 stator/rotor sets (40), a 1 phase winding, 5 teeth with windings per pole (42), 1 rotor/stator pole (41), the multi-circular flux loops (44), the most effective circular flux (46) and a direction of movement (45). All flux rotation direction create by winding are inverse to each other adjacent.

- **Fig.11a:** A 3-phase motor with non-overlap-pole type, a phase A (47a), a phase B (47b), a phase C (47c), a rotor/stator (48) and a rotor/stator support (49).
- **Fig.11b:** A 3-phase motor with non-overlap-pole type with a pole space, a phase A (50a), a phase B (50b), a phase C (50c), a rotor/stator (51) and a rotor/stator support (52).
- **Fig.11c:** A 3-phase motor with non-overlap-pole type without a pole space, a phase A (50a), a phase B (50b), a phase C (50c), a rotor/stator (51) and a rotor/stator support (52). NOTE: In case of a number of stator teeth per pole are even number, there are no inverse phase winding.
- **Fig.11d:** A 3-phase motor with 4-pole rotor (97), similar function to a 6/4-pole switched reluctance motor, 5 teeth with winding per pole, stator frame (98), motor shaft (100) and rotor core (99).
- **Fig.12:** A 2-pole (93), a 3-phase motor with non-overlap-pole type, 10 winding teeth with windings per pole, stator frame (94), motor shaft (96) and rotor core (95)
- **Fig.13:** A 3-pole (57), a 3-phase motor with non-overlap-pole type, 6 teeth with windings per pole, stator frame (58), motor shaft (60) and rotor core (59)
- **Fig.14:** A 4-pole (53), a 3-phase motor with non-overlap-pole type, 5 teeth with windings per pole, stator frame (54), motor shaft (56) and rotor core (55)
- **Fig.15:** A 2-pole (61), a 3-phase DC pulse motor with overlap-pole type, 15 teeth with windings per pole, stator frame (62), motor shaft (64) and rotor core (63)
- **Fig.16:** A 3-pole (65), a 3-phase DC pulse motor with overlap-pole type, 9 teeth with windings per pole, stator frame (66), motor shaft (68) and rotor core (67)
- **Fig.17:** A 4-pole (69), a 3-phase DC pulse motor with overlap-pole type, 9 teeth with windings per pole, stator frame (70), motor shaft (72) and rotor core (71)
- **Fig.18:** A 5-pole (73), a 3-phase DC pulse motor with overlap-pole type, 6 teeth with windings per pole, stator frame (74), motor shaft (76) and rotor core (75)
- **Fig.19:** A 6-pole (77), a 3-phase DC pulse motor with overlap-pole type, 6 teeth with windings per pole, stator frame (78), motor shaft (80) and rotor core (79)
- **Fig.20:** A 2-pole (81), a 3-phase AC motor with overlap-pole type, 15 teeth with windings per pole, stator frame (82), motor shaft (84) and rotor core (83)
- **Fig.21:** A 4 poles (85), a 3-phase AC motor with overlap-pole type, 9 teeth with windings per pole, stator frame (86), motor shaft (88) and motor core (87)

- **Fig.22:** A 6 poles (89), a 3-phase AC motor with overlap-pole type, 6 teeth with windings per pole, stator frame (90), motor shaft (92) and motor core (91)
- **Fig.23:** The waveform for the invention: (a) A waveform for a 3-phase non-overlap-pole type (DC pulse machine); (b) A waveform for a 3-phase overlap-pole type (DC pulse machine); (c) A waveform for a 3-phase overlap-pole type (AC machine)

*Please note that the motor core may not be necessary if the design circumstance does not concern about torque per weight therefore the motor core can be the rotor lamination area.

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2834	

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Fig 1 A flux density of one phase excitation (Prior Art)

09/804,792

UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

NOTICE OF DRAWING INCONSISTENCY WITH SPECIFICATION

The drawings filed 3-14-01 have been received. However, an inconsistency exists between the drawings and the Brief Description of the Drawings in the specification.

Figures _____ are listed in the Brief Description of the Drawings in the specification but not contained in the Drawings.

Figures 1 are contained in the Drawings but not listed in the Brief Description of the Drawings in the specification.

Applicant is required to correct the above-noted inconsistency within a time period of **ONE MONTH or THIRTY (30) DAYS, whichever is longer,** from the mailing date of this Notice, or within the time remaining in the time period set forth in the Notice of Allowability (Form PTOL-37) to file corrected drawings, whichever is longer. **NO EXTENSION OF THIS TIME PERIOD MAY BE GRANTED UNDER EITHER 37 CFR 1.136 (a) OR (b)**

Failure to correct the above noted inconsistency will result in **abandonment** of the application.

The file will be held in the Publishing Division to await the correction of the inconsistency.

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FORM PTO-1631 (REV. 10-03)